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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/824,003

04/02/2001

Roy M. Milner

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28711

7590

10/03/2003

ROY MATTHEW MILNER  
7425 SOUTH BUSHNELL BLVD.  
BROKEN ARROW, OK 74014-2510

EXAMINER

BOOKER, KELVIN E

ART UNIT

PAPER NUMBER

2121

DATE MAILED: 10/03/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/824,003

Applicant(s)

MILNER, ROY M.

Examiner

Kelvin E Booker

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04/02/01
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: *Detailed Office Action*.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter that the applicant regards as his invention.

2. **Claims 1-8** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Claim one** provides for the use of “a process wherein data from CAD drawings is stored in a central location for collision checking purposes”, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

**Claim eight** is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements. See MPEP § 2172.01. The applicant discloses a system for performing a function, but fails to disclose the elements deemed necessary for operation of the system [e.g., processor, database, knowledge base, networking equipment, etc], in which there exist a means for providing “collision checking” between drawings, consistent with the system’s disclosure within the specification.

***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. **Claims 1-8** are rejected under 35 U.S.C. 101 because the invention as disclosed in claims one and eight are directed to non-statutory subject matter. While the claims are in the technological arts, they are not limited to practical applications in the technological arts.

Specifically, the claims focus on a series of steps to be performed on a computer, but the ideas are disclosed abstractly from any particular practical application. **As per claim one**, the applicant discloses a process for checking “*collisions*” in CAD drawings stored in a central location, but fail to provide the steps necessary to perform the process claimed.

To constitutionally interpret the word “process”, the Supreme Court has held that: “\*\*\*A process is a mode of treatment of certain materials to produce a given result. It is an act, or a series of acts, performed upon the subject matter to be transformed and reduced to a different state or thing. \*\*\*The Process requires that certain things should be done with certain substances, and in a certain order; but the tools to be used in doing this may be a secondary consequence.”(emphasis added) *Diamond, Commission of Patents and Trademarks v. Diehr and Lutton*, 209 USPQ 1, 6 (1981) quoting *Cochrane v. Deener*, 94 U.S. 780, 787-788 (1876).

This Constitutional interpretation of the word “process” is a long-standing one that the Supreme Court requires to be applied in interpreting 35 USC 101. *Diamond v. Diehr* at 6. Consequently, the use of that interpretation is Constitutionally required when we interpret the Federal Circuit’s standard that a “new and useful process” is one that produces a useful,

concrete, and tangible result". Cf. *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 47 USPQ2d 1596, 1600-1601 (Fed. Cir. 1998).

**Further, claim eight** focuses on "*a system for collision checking between drawings*" wherein the system is recited in means plus function format. However, the claim fails to define a statutory specific machine. A machine or manufacture or system claim may be one of two types: (1) a claim that encompasses any and every machine for performing the underlying process or any and every manufacture that can cause a computer to perform the underlying process, or (2) a claim that defines a specific machine or manufacture. When a claim is of the first type, Office personnel are to evaluate the underlying process the computer will perform in order to determine the patentability of the product.

The mere fact that a hardware element is recited in the claim does not necessarily limit the claim to a specific machine or manufacture. If a product claim encompasses any and every computer implementation of a process, when read in light of the specification, it should be examined on the basis of the underlying process. Such a claim can be recognized, as it will define the physical characteristics of a computer or computer component exclusively as functions or steps to be performed on or by a computer, and encompass any and every product in the stated class, configured in any manner to perform the process.

Claims that define a computer related invention as a specific machine or specific article of manufacture must define the physical structure of the machine or manufacture in terms of its hardware or hardware and "specific software." The applicant may define the physical structure of a programmed computer or its hardware or software components in any manner that can be clearly understood by a person skilled in the relevant art. Generally a claim drawn to a particular

programmed computer should identify the elements of the computer and indicate how those elements are configured in either hardware or a combination of hardware and specific software.

**Claims 2-7** do not cure the defect in the claim one. On this basis, **claims 1-8** are rejected under 35 USC 101.

### *Conclusion*

5. The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- A. Hollingsworth et al., U.S. Patent No. 5,444,836;
- B. Quintero et al., U.S. Patent No. 5,293,479;
- C. Virgil et al., U.S. Patent No. 5,493,679;
- D. Lee et al., U.S. Patent Application Publication No. 2002/0089499;
- E. Kita et al., U.S. Patent No. 5,408,597;
- F. Ponamgi et al., "Incremental Algorithms for Collision Detection Between Solid Models";
- G. Li et al., "Incremental 3D Collision Detection with Hierarchical Structures";
- H. Manesh et al., "Automatic Vectorization of Scanned Engineering Drawings";
- I. Gross et al., "Diagram Query and Image Retrieval in Design";
- J. Tsay et al., "A Personal Computer Graphical Environment for Industrial Distribution System Education, Design and Analysis";
- K. Chen et al., "An Integration of Neural Network and Rule-Based Systems for Design and Planning of Mechanical Assemblies";

L. Yang et al., "An Intelligent Symbol Usage Assistant for CAD Systems";  
M. Chan et al., "The PEP-II Project-Wide Database"; and  
N. Hamdi-Cherif, A., "The CASCIDA Project: A Computer-Aided System Control for Interactive Design and Analysis".

6. An inquiry concerning this communication or earlier communications from the examiner should be directed to Kelvin Booker whose telephone number is (703) 308-4088. The examiner can normally be reached on Monday-Friday from 7:00 AM-5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anil Khatri, can be reached on (703) 305-0282. The fax number for the organization where this application or proceeding is assigned is (703) 746-7239.

An inquiry of a general nature or relating to the status of this application proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

**K.E.B.**

**Art Unit 2121**

**September 28, 2003**



**ANIL KHATRI**  
**SUPERVISORY PATENT EXAMINER**